

Lesson 3 Scientific Notation.notebook

Scientific Notation

$$2 \times 10^{-6}$$

- a method to write very large or very small numbers in an easier form
- a number written in scientific notation has 2 parts: a number between 1 and 10 and a power of 10

ex. 4.67×10^4

ex. 6.2347×10^{-8}

Converting numbers into scientific notation:

- step 1 move the decimal left or right until a number between 1 and 10 is found
- step 2 count the number of places you moved the decimal. If the beginning number is **bigger than 1** the exponent used will be **positive**. If the beginning number is **less than 1** the exponent will be **negative**.

Ex. 1 2870000000 2.87×10^9

Ex. 2 2346578674 2.346578674×10^9

Ex. 3 0.0000000000945 9.45×10^{-11}

Ex. 4 0.004509473279 $4.509473279 \times 10^{-3}$

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Converting from S.N. to normal form

Ex. 1 2.678×10^8 *places to right*
 $2.678 E^8$ ✓
 267800000

Ex. 2 6.00005×10^5
 600005

Ex. 3 2.874×10^{-3} *move decimal left*
 0.002874

Ex. 4 9.99×10^{-1}
 0.999

Scientists often place numbers in scientific notation to show the appropriate number of significant digits.

2.961×10^4 ✓
 3.0×10^4

Ex.1 round 29610 to 2 s.d.

Ex 2. round 0.0000800 to 3 s.d.

8.00×10^{-5}

ex. 3 round 456000000000000 to 1 s.d

5×10^{14}
 4.6×10^{14}

Classwork/homework work on sheet